

CLAIMS

1. A lubricating oil composition which is obtained by incorporating, into (A) a lubricant base oil comprising a mineral oil, a synthetic oil or a mixture thereof,

(B) a nitrogen-containing compound having at least one alkyl group or alkenyl group having a number-average molecular weight of 900 or more and/or a derivative thereof in an amount of 0.01 to 0.20% by mass in terms of the content of nitrogen of the total of the composition, and

(C) a viscosity index improver having a weight-average molecular weight of 40,000 or less, so as to set the viscosity index of the composition to 160 or more and set the kinematic viscosity of the composition into the range of 20 to 30 mm²/s at 40°C.

2. The lubricating oil composition according to claim 1, wherein the (B) component is a nitrogen-containing compound having two alkyl groups or alkenyl groups having a number-average molecular weight of 1200 or more and/or a derivative thereof.

3. The lubricating oil composition according to claim 1 or 2, which essentially comprises, as the (B) component, a boron-modified compound of a nitrogen-containing compound having at least one alkyl group or alkenyl group having a number-average molecular weight of 900 or more in an amount of 0.002% or more by mass in terms of the content of boron of the total of the composition.

4. The lubricating oil composition according to claim 3, wherein the boron-modified compound is a boron-modified compound of a nitrogen-containing compound having at least one alkyl group or alkenyl group having a number-average molecular weight of 1200 or more.

5. The lubricating oil composition according to claim 3, wherein the boron-modified compound is a boron-modified compound of a nitrogen-containing compound having two alkyl groups or alkenyl groups having a number-average molecular weight of 1200 or more.

6. The lubricating oil composition according to claim 3, wherein the boron-modified compound is a boron-modified compound of a nitrogen-containing compound having two alkyl groups or alkenyl groups having a number-average molecular weight of 1700 or more.

7. The lubricating oil composition according to any one of claims 3 to 6, wherein the ratio by mass of boron to nitrogen (B/N ratio) in the boron-modified compound is from 0.01 to 3.

8. The lubricating oil composition according to claim 1, wherein the (B) component comprises a boron-modified compound of a bis type succinimide having a poly(iso)butenyl group having a number-average molecular weight of 2000 or more.

9. The lubricating oil composition according to claim 1, wherein the (B) component comprises both of a bis type succinimide having a poly(iso)butenyl group having a number-average molecular weight of 900 or more and less than 2000 and boron-modified compounds of a bis type succinimide having a poly(iso)butenyl group having a number-average molecular weight of 2000 or more.

10. The lubricating oil composition according to any one of claims 1 to 9, which is used in an automatic transmission or a continuously variable transmission.

11. Use of the lubricating oil composition according to any one of claims 1 to 9 in an automatic transmission or a continuously variable transmission.

12. A method for maintaining the anti-wear characteristic of an automatic transmission or a continuously variable transmission by use of the lubricating oil composition according to any one of claims 1 to 9.